



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink 4-9

Issued: 28 Feb 2022 / 0830L (1330Z)

Valid: 3 Mar 2022 / 0925 – 1105L (1425 – 1605Z)



Forecast Discussion: Surface high pressure is expected to be the dominant weather feature for the forecast period. The ridge is expected to be over the north central Gulf of Mexico and extend eastward across north Florida and into the Atlantic. This will result in weak north to northeast winds over the Spaceport. Not much in the way of cloud cover is expected aside from scattered cumulus clouds. Thus, the primary concern for launch day is the Cumulus Cloud Rule. In the event of a 24-hour delay, very similar weather conditions are expected. The center of the ridge moves slightly eastward which will give the winds a more easterly component. Once again there will be some cumulus clouds so the primary concern will be the Cumulus Cloud Rule.

Launch Day	Probability of Violating Weather Constraints ¹							
	10%	Primary Concerns: Cumulus Clouds						
	Weather Conditions					Additional Risk Criteria ²		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	68°F / 76%	Cumulus	Scattered	2,500	4,500	Booster Recovery Weather:	Low
	Liftoff Winds (200'): 030° 12 – 17 mph					Solar Activity:	Low	
24-Hour Delay	Probability of Violating Weather Constraints							
	10%	Primary Concerns: Cumulus Clouds						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	70°F / 71%	Cumulus	Scattered	2,500	4,500	Booster Recovery Weather:	Mod
	Liftoff Winds (200'): 060° 12 - 17 mph					Solar Activity:	Low	
Notes	1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.							
	2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.							
See https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf for more information								
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued		1 MAR 2022						